

# MANUFACTURING EXTENSION PARTNERSHIP

## Success Stories from the Field

### eXpanded Solutions L.L.C. of Wewoka

#### Oklahoma Alliance for Manufacturing Excellence

#### Expanded Solutions Benefits From Redesign

##### Client Profile:

Expanded Solutions L.L.C., operated by Rick and Carol Bahner, manufactures metal mesh and grating for a plethora of uses. The products are manufactured from carbon, galvanized and stainless steel, aluminum, copper and other metals. Mesh sizes range from three-thousandth-of-an-inch silver for high-tech battery applications to quarter-inch steel and aluminum used for catwalks. The 50-year-old business employs 24 people at its Wewoka, Oklahoma, facility. It also has a plant in Oklahoma City, Oklahoma.

##### Situation:

Expanded Solutions was experiencing a series of problems in one of its high-speed camshafts. Continual cracks and failures were leading to a lot of downtime on one of the company's biggest and most important machines. The company contacted Bob Carter, a manufacturing extension agent with The Oklahoma Alliance for Manufacturing Excellence (The Alliance), a NIST MEP Network affiliate. Carter had a long-time relationship with the company and often provided advice on a variety of concerns. Carter called on Doug Enns and Shea Pilgreen, Applications Engineers for The Alliance, to provide assistance.

##### Solution:

Enns and Pilgreen studied the camshaft design and suggested fabrication improvements. The modifications worked and have led to hundreds of thousands of dollars in gained production time. Carter also is working with Expanded Solutions to implement Lean Manufacturing concepts to the two factories. One area Lean is addressing is changeover time. Reducing the time necessary to modify equipment setup between jobs is increasing production time and boosting total output. Carter also helped guide Expanded Solutions through the process that helped the company qualify for the Safety and Health Achievement Recognition Program (SHARP). Companies work toward the accreditation for many years and, nationwide, fewer than 1,000 companies are certified. The SHARP certification exempts Expanded Solution from programmed OSHA inspections. It is a reflection of safe and reliable working conditions and especially impressive because the plants operate large and traditionally dangerous machines. Full-fledged orientation and monthly safety meetings are now the norm.

##### Results:

- \* Increased sales by \$100,000.
- \* Created 4 new jobs.
- \* Retained 4 jobs.
- \* Avoided \$60,000 in unnecessary investment.
- \* Reduced employee turnover.

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- \* Lowered compensation rates.
- \* Qualified for SHARP certification.

**Testimonial:**

"Working with The Alliance, we are continuing the traditions of innovation and excellence established over the past 50 years. We are confident that the future of Expanded Solutions is bright."

Rick Bahner, Owner